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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/685,799      | 10/16/2003  | David Reginald Adams | 040283-0211         | 5143             |

22428 7590 08/04/2005

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EXAMINER

BALASUBRAMANIAN, VENKATARAMAN

ART UNIT PAPER NUMBER

1624

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/685,799

Applicant(s)

ADAMS ET AL.

Examiner

Venkataraman Balasubramanian

Art Unit

1624

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-18 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

S-00

### DETAILED ACTION

Claims 1-18 are pending.

#### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-4 and 9-17, drawn to compound of formula I wherein  $X_1$ ,  $X_2$ ,  $X_3$  and  $X_4$  are nitrogen, namely tricyclic tetrazinopiperazine, composition and method of use, classified in class 544, subclass 179.
- II. Claims 1-4 and 9-17 drawn to compound of formula I wherein  $X_1$ ,  $X_2$ ,  $X_3$  or  $X_2$ ,  $X_3$ ,  $X_4$  are nitrogen, the other  $C-R_4$ , namely tricyclic 1,2,3-triazinopiperazine, composition and method of use, classified in class 544, subclass 180, class 514, subclass 241.
- III. Claims 1-6 and 9-17, drawn to compound of formula I wherein  $X_1$ ,  $X_2$ ,  $X_4$  or  $X_1$ ,  $X_3$ ,  $X_4$  are nitrogen, the other  $C-R_4$ , namely tricyclic 1,2,4-triazinopiperazine, composition and method of use classified in class 544, subclass 182, class 514, subclass 242.
- IV. Claims 1-17, drawn to compound of formula I wherein  $X_1$ ,  $X_2$  or  $X_2$ ,  $X_3$  or  $X_3$ ,  $X_4$  are nitrogen, the other two  $C-R_4$ , namely tricyclic pyridazinopiperazine, composition and method of use, classified in class 544, subclass 234, class 514, subclass 248.
- V. Claims 1-17 drawn to compound of formula I wherein  $X_1$ ,  $X_3$  or  $X_2$ ,  $X_4$  are nitrogen, the other two  $C-R_4$ , namely tricyclic pyrimidinopiperazine,

Art Unit: 1624

composition and method of use, classified in class 544 subclass 251, class 514, subclass 267.

VI. Claims 1-6 and 9-17, drawn to compound of formula I wherein  $X_1$  and  $X_4$  are nitrogen,  $X_2$ , and  $X_3$  are C-R<sub>4</sub>, namely tricyclicpyrazino-piperazine, composition and method of use, classified in class 544, subclass 346, class 514, subclass 249.

VII. Claims 1-17, drawn to compound of formula I wherein one of  $X_1$ ,  $X_2$ ,  $X_3$ ,  $X_4$  is nitrogen, the other three C-R<sub>4</sub>, namely tricyclicpyridino-piperazine, composition and method of use, classified in class 544, subclass 360, class 514, subclass 250.

VIII. Claims 1-18, drawn to compound of formula I wherein  $X_1$ ,  $X_2$ ,  $X_3$  and  $X_4$  are C-R<sub>4</sub>, namely tricyclicbenzopiperazine, composition and method of use, classified in class 544 subclass 344, class 514, subclass 247.

The inventions are distinct, each from the other because of the following reasons:

As per MPEP § 803, there are two criteria for a proper requirement for restriction between patentably distinct inventions:

(A) The inventions must be independent or distinct as claimed and

(B) There must be a serious burden on the examiner if restriction is required.

Invention I, II, III, IV, V, VI, VII and VIII are independent and distinct from each other because they are directed to structurally dissimilar compounds that lack common core, namely, tricyclic-terazino-piperazine versus tricyclictriazinopiperazine, versus tricyclicpyrimidinopiperazine versus tricyclicpyridazinopiperazine versus

Art Unit: 1624

tricyclicpyridinopiperazine versus tricyclicbenzopiperazine core compounds. Consequently, the groups require separate classification and prior art searches. They can be made and used independently. Art, which may render obvious or anticipate one of the groups would not necessarily do the same for the other group. For example, references cited in the Information Disclosure Statement which may read on group VIII core compounds may not anticipate or render the other core compounds. Each can support a patent as the compounds of each group are capable of being utilized alone not in combination with other members listed in the Markush group.

In addition, it is necessary to classify and search all the hetero cores and such a search of all cores would be a serious search burden given the limited time available for each application.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

This application contains claims directed to the following patentably distinct species of the claimed invention: tricyclic-terazino-piperazine, tricyclictriazinopiperazine, tricyclicpyrimidinopiperazine, tricyclicpyridazinopiperazine, tricyclicpyridinopiperazine and tricyclicbenzopiperazine. See claim 18 for species of Group VIII.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1-17 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

In view of distinct nature of each of the invention, the restriction is set forth in writing.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim.

Art Unit: 1624

remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### **Conclusion**

Any inquiry concerning this communication from the examiner should be addressed to Venkataraman Balasubramanian (Bala) whose telephone number is (571) 272-0662. The examiner can normally be reached on Monday through Thursday from 8.00 AM to 6.00 PM. The Acting Supervisory Patent Examiner (SPE) of the art unit 1624 is James O. Wilson, whose telephone number is (571) 272-0674. The fax phone number for the organization where this application or proceeding is assigned (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAG. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-2 17-9197 (toll-free).

  
Venkataraman Balasubramanian

7/31/2005